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EDITED BY ROBERT SAUNDBY, M.D.

CONTENTS:

Original Communications.

A Note on Colles' Fracture. By BERTRAM C. A. WINDLE, M.A., M.D. 145

Sudden Death in Diabetes. By ROBERT SAUNDBY, M.D. 148

Myxœdema. By C. W. SUCKLING, M.D. 156

On Mastoid Inflammation and the Treatment of Otorrhœa with Dry Powders. By CHARLES WARDEN, M.D. 159

The Treatment of Compound Depressed Fracture of the Skull. By GILBERT BARLING, M.B. 164

Asclepias Incarnata. By J. HOSACK FRASER, M.B. 176

Reviews and Notices of Books.

Oliver on Bedside Urine Testing... ... 177

Tibbits on Medical Fashions in the Nineteenth Century 179

Hutchinson on The Pedigree of Disease 181

Poore on Coffee and Tea 181

Macpherson's Annals of Cholera... ... 182

Annuaire des Spécialités Médicales et Pharmaceutiques 182

The South African Medical Journal ... 183

Reports of Societies.

Midland Medical Society 183

Medical News.

Medical Sickness, Annuity, and Life Assurance Society — The Cremation Society of England—Mitchell's Hematin Staining Fluid—etc. etc. 187

OBITUARY 191

MISCELLANY 192

NEW BOOKS, ETC., RECEIVED 192

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THE

BIRMINGHAM MEDICAL REVIEW.

APRIL, 1884.

ORIGINAL COMMUNICATIONS.

A NOTE ON COLLES' FRACTURE.

BY BERTRAM C. A. WINDLE, M.A., M.D. DUBLIN.
PATHOLOGIST TO THE GENERAL HOSPITAL, BIRMINGHAM; SOMETIME DEMONSTRATOR OF ANATOMY AND HISTOLOGY, ROYAL COLLEGE OF SURGEONS, IRELAND.

In spite of the frequency of occurrence of the fracture generally known by the name of Abraham Colles, it is but seldom that an opportunity is afforded of making a dissection of the recent lesion. The following account may therefore be interesting, and the more so because there are still many vexed questions in connection with this fracture which can only be settled by the careful comparison of a larger number of recent dissections than have yet found their way into medical literature.

The body from which this specimen was taken was that of an old man brought in dead to the General Hospital, with a history of a fall on the head down some cellar stairs. His right wrist presented all the characteristic appearances of a Colles' fracture.

The *post mortem* examination showed that death was consequent on a dislocation of the cervical vertebræ. A dissection of the limb gave the following results:— Cadaveric rigidity had disappeared owing to the length of time which had intervened between death and the

autopsy. There was a small amount of extravasation of blood into the substance of the pronator quadratus, but otherwise the tissues around the joint presented no noteworthy appearances. There was not the least impaction of the fragments. The lower ends of the radius and ulna were removed and macerated. They present the following appearances :—

Radius.—The lines of fracture in this bone may be divided into two groups, viz., transverse and longitudinal.

1.—One approximately transverse line of fracture runs across the bone at an average distance of 2·5 c.m. from its articular surface. On the anterior surface this line resembles an obtuse angled V with proximally directed apex, its inner limb being shorter than its outer. Posteriorly the general direction is from without inwards and upwards.

2.—The distal fragment thus separated from the bone is split into five pieces ; of these the largest (1) is situated anteriorly and internally, and forms two-thirds of the anterior aspect and one-half of the articular surface. The next in size (2) occupies the whole of the outer side of the bone, about one third of the articular surface, and nearly half the posterior aspect. This surface presents a triradiate crack without separation. The 3rd occupies the postero-internal half of the bone, but only forms a small part of the articular surface. The 4th, situated between 1 and 2, completes the anterior aspect but does not encroach on the articular surface, whilst the 5th, between 2 and 3, does to a small extent. In the upper part of the radius there is a crack without separation, running 1·7 c.m. from the apex of the obtuse-angled V already mentioned, upwards and inwards.

Ulna.—The styloid process is wrenched off, together with the triangular fibro-cartilage, which only remains

adherent to the ulna by a small attachment at the middle of the anterior aspect.

So much has been written upon the subject of this fracture that I do not purpose entering into it at any length, but shall content myself with drawing attention to two points in the elucidation of which the specimen just described may be of some service.

Firstly, as to impaction or non-impaction of the fracture. Voillemier maintained that all fractures within an inch of the distal extremity of the radius were impacted. This he considered proved by the presence of a vertical line of compact tissue situated in the middle of cancelious tissue. This band, which he states that he found in every old case of Colles' fracture which he examined, is free below but continuous above with the body of the radius, and he considered it to be the compact tissue of one surface of the upper fragment embedded in the cancellous tissue of the lower.

Voillemier's position has been rendered untenable by the dissection of a number of recent specimens in which, as in that described above, no impaction existed; and the appearance on which he relied as his proof has been satisfactorily explained in another manner by the late Prof. R. W. Smith in his work on Fractures and Dislocations.

Secondly, as to the exact mechanism of the fracture. The two most general views may be taken as those of Nélaton and Lecomte. The former, that of *écrasement*, accounts for the lesion by supposing that the radius, pressed between the weight of the body on the one hand and the resistance of the ground through the carpal arch on the other, gives way at a short distance from its distal extremity. Lecomte, who supported the latter theory, that of *arrachement*, believed that the anterior radio-

carpal ligament was the most potent factor, and that if it was divided previously, by no hyper-extension of the hand could the radius be fractured.

Though this theory may account satisfactorily for the transverse fracture, it is somewhat difficult to see how the extensive comminution of the lower fragment can be explained by it.

SUDDEN DEATH IN DIABETES.

BY ROBERT SAUNDBY, M.D. EDIN.,
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ASSISTANT PHYSICIAN TO THE GENERAL HOSPITAL, BIRMINGHAM.

WITHIN the last few years a great deal of attention has been paid to the manner in which saccharine diabetes ends fatally, and especially to that striking and tragic form which has been called diabetic coma, from the constancy with which coma supervenes to close the series of remarkable and distressing symptoms.

The frequency with which such cases occur may be inferred from the statement of Dr. Stephen Mackenzie,[1] that of the cases of fatal diabetes collected by him from the registers of the London Hospital, all under the age of 25, with only one exception, died of coma.

Its relative greater frequency in young persons and acute cases is quite certain, but for the most part its etiology remains obscure. Clinical experience has suggested the dangers of long journeys, muscular exertion, nervous shock, and exposure to cold. Constipation is generally present, is very obstinate, and is theoretically likely to favour the onset of these symptoms.

Drs. Bond and Windle[2] in their remarks on a fatal case of diabetic coma which occurred at the General Hospital,

say that the change from ordinary diet to richly albuminous food has been present as a factor in this and one other case under their observation. While not doubting the influence which great and sudden changes in diet can produce in the system, and bearing in mind that Charcot[3] states that the converse change frequently produces glycosuria as in the instance of novices in the monastery of La Trappe, I do not forget that in the case published by my friend Dr. Rickards,[4] the patient was taking ordinary diet. This relation has not been referred to by other writers, and was obviously absent in many cases reported where the symptoms came on during the course of treatment, or during no treatment at all.

The premonitory symptoms vary very much. Sometimes the attacks begin with maniacal excitement; more commonly abdominal pain or headache are complained of; a sudden fall in the sp. gr. and sugar contents of the urine has been sometimes noticed, and when observed should be regarded with suspicion, although such an alteration is by no means always a cause for alarm.

Prof. Lépine[5] attaches much importance to the rapidity of the pulse as a trustworthy prodromal sign.

The urine gives a Burgundy red colour on the addition of a solution of the perchloride of iron, the colour disappearing on heating the mixture. This reaction was at one time supposed to be a test for acetone, but this is a mistake. It is certainly present in diabetic urine apart from coma, and has been met with in other diseases. Thus Jaksch[6] has met with it in many acute disorders, especially measles, scarlatina, and pneumonia. He has also observed it in a case of gastric cancer terminating fatally by coma. Hoppe-Seyler[7] has described it in a case of sulphuric acid poisoning as occurring during the time

no food was taken. Senator[8] observed it in a case of atropine poisoning which died comatose. Dr. Windle[9] has observed it in pneumonia, Bright's disease, scarlatina, and several other pathological conditions apart from coma. It cannot be therefore regarded as in any sense a pathognomonic sign, and we sadly need data to enable us to say whether it is ever absent in cases of diabetic coma. So far as I am aware no one has published a case in which its absence is noted, but I am quite prepared to admit the possibility.

As you are probably aware, diabetic coma was first described by Kussmaul[10] in 1874. In the group of symptoms to which he drew attention, great and well-deserved importance was attributed to the peculiar character of the respiration, which is laboured and hurried, although the respiratory murmur may be plainly audible all over the chest. This symptom is so very striking, that Senator, in a recent paper, has maintained that it must be regarded as characteristic of Kussmaul's type of coma, and that no case of terminal coma in which this peculiar breathing is not present should be included in this class.

Frerichs,[11] too, in his valuable contribution to this question, classifies his cases mainly according to the presence or absence of this symptom. Much as has been said about this dyspnœa, it is not always present in diabetic coma, and such a case was reported in the British Med. Journal by Dr. Prescott Roberts.[12]

Senator, while regarding this respiratory dyspnœa as essential to the type of Kussmaul's coma, shows that it is by no means confined to diabetes, and publishes notes of cases occurring in chronic cystitis, gastric cancer, anæmia and atropine poisoning in which it was present.

Dr. W. Roberts[13] gives "slow panting and laborious

respiration with drowsiness, rarely coma, and very exceptionally convulsions" as symptoms of obstructive suppression of urine.

Another symptom which is very striking when present, but far from constant, is the peculiar odour of the breath, which has been variously described as like sour beer, apples, hay, chloroform, and acetone. Is it probable that all these comparisons have been applied to the same odour? It would seem that acetone or sour beer affect our noses very differently to apples, chloroform, or hay. Unfortunately, it is very difficult to institute any precise standard of odour. But Drs. Frederick Taylor and Stephen Mackenzie have never been so fortunate as to smell this odour. Frerichs groups several of his cases as not presenting this symptom; it has not been always noticed in the cases we have observed at the General Hospital.

These differences indicate the importance of observing and recording carefully all the facts in such cases when they come under observation, It is probable that there may be two or more types of sudden death in diabetes, and that these may be dependent upon an equal number of distinct morbid influences; but in order to determine this, we want first of all carefully recorded clinical histories. Perhaps I may be permitted to say, that I have become convinced that too much reliance has been placed upon the assistance to be derived in the advancement of medical knowledge from laboratory work, and that the all-important value of clinical observations is too often forgotten.

For want of clinical data all pathological work comes sooner or later to a stand still. Morbid anatomy with all its refinements and aids from histology and chemistry, is not, and can never be a substantive science. It is the

great adjunct to clinical medicine, but the latter must lead the way. It is therefore worth while to give a short account here of Frerichs's attempt to classify the various forms of diabetic coma.

He distinguishes three types. *In the first group* he places cases which suddenly, and usually after previous exertion, become prostrated, with cold extremities, small failing pulse, drowsiness, and loss of consciousness, terminating fatally in a few hours.

In the second group the duration is longer, and there is a prodromal stage which may be general prostration, gastric disturbance, vertigo, vomiting, constipation, or a local disease, a dental abscess, pharyngitis, an abscess with a tendency to gangrene, bronchitis, or catarrhal pneumonia. The attack itself commences with headache, restlessness, delirium, anxiety, sometimes with maniacal outbursts, dyspnœa, frequent deep respiration with free entrance of air into the lungs, sometimes with cyanosis, sometimes without it, feeble rapid pulse, low temperature, drowsiness and coma. The breath has a peculiar smell like fruit, or chloroform, or acetone; Frerichs is here not very definite about the smell. Such cases may recover temporarily, and in some rare instances the attack may quite pass away. The duration of the symptoms may be from 24 hours to 3 or 4 days, or even longer.

In the third group he places cases which present no dyspnœa or anxiety, have moderately firm pulses, and are fairly well nourished. The attack is characterised by headache, a feeling of intoxication, with disordered gait, sleepiness, and gradual coma, from which they do not awaken. The breath has the characteristic smell.

In the first group the symptoms are those of collapse, coma occurring only at the end, and the duration of the

whole attack is very short. In the second group, we have Küssmaul's typical complex of symptoms, with dyspnœa, peculiar odour of breath, and coma. In the third group, there is no dyspnœa, the symptoms more closely resemble intoxication, but the breath has the characteristic smell, and coma is present.

I do not wish to trouble you with very much pathology, but as there has been so much discussion upon the causation of these sudden deaths, you might blame me if I did not attempt to tell you briefly the present state of the question.

There has never been any dispute that heart failure is the obvious explanation of a certain number of these cases, such, for example, as Frerichs places in his first group. This is said by Schmitz[15] to be due to fatty degeneration of the heart, but his facts are not very conclusive. Frerichs has shown that the muscular fibres of the heart in diabetes undergo a hyaline or glycogenic degeneration, in which their power of contractility is lost, and it is to this, in all probability, that we must attribute the frequency of cardiac failure. But cardiac failure will not account for the symptoms in groups two and three. It has been suggested that the phenomena are uræmic. But to such a view there are many objections. I think we might have clearer notions than we generally possess as to what we mean clinically by "uræmia;" but certainly convulsive phenomena, from muscular twitching to complete epileptiform convulsions, are its most constant and characteristic features. But coma in diabetes is only rarely preceded by convulsions, and they never constitute a prominent symptom. If by uræmia is meant accumulation of urea in the blood, the facts clearly established in many cases contradict the suggestion. If this is not what is meant by

uræmia, then I should require a definition of it, and some kind of evidence in favour of the view. So far as my information goes, I know of no constituent of the urine, and, indeed, of no substance whatever, which has been shown capable of reproducing the principal phenomena of diabetic coma. This is a sufficient answer to Ebstein's[16] suggestion that the degeneration of the renal epithelium, which he has described, leads to an accumulation in the blood of normal or pathological constituents of the urine. Frerichs has shown, too, that this degeneration of the epithelium is due to infiltration by glycogen, that it is present in all cases of diabetes, and that it is not specially marked in those dying with coma.

The suggestion that fat embola of the lungs or nervous centres could produce these symptoms is even less worthy of occupying our time. Milky or fatty blood has been present in only a small number of cases, and in a still smaller number have any fat embola been described. Not one of the classical symptoms is dependent upon the presence of milky or fatty blood. I think Dr. Barling and I[17] have shown that even when fat is present in large quantities, it does not always cause embola; and that there is reason to believe that what have been called embola may have been only *post mortem* thrombi, containing fat globules. Finally, even in those cases in which the embola have been described, they do not appear to have been more numerous than may be seen in cases of fracture, where they have given rise, during life, to no symptoms at all.

Then there is the view advocated by Kussmaul that the symptoms are really due to poisoning by acetone; but Salomon has found that large doses, 20 to 25 grammes, caused no inconvenience to man or animals, nor did the

urine give the ferric chloride reaction. In one case this substance was given in doses of 20 grammes daily to a diabetic whose urine previously gave the ferric chloride reaction, but without any disturbance of his general condition. Salomon also collected the expired air of diabetics with characteristic odorous breaths, but failed to find any acetone in it. Similar experiments with aceto-acetic acid, the substance in the urine which is supposed to give the red coloration with ferric chloride were also equally negative, except that large doses, 40 grammes, caused acetone to appear in the urine, but in no case did the ferric chloride reaction appear; there was no frequency of respiration, no tendency to somnolency, and even the appetite remained unimpaired. These experiments are at variance in one respect with those of Quincke who found that in poisonous doses this substance caused death with marked dyspnœa.

Von Jaksch,[18] who has worked very assiduously at the chemistry of this subject, has succeeded lately in extracting from the urine the substance giving the ferric chloride reaction, and considers that it is undoubtedly aceto-acetic acid. This is probably correct, but it is also pretty certain, from what has just been stated, that this substance is not the toxic agent to which the symptoms are due. What this substance is remains an unsolved question at present.

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MYXŒDEMA.

BY C. W. SUCKLING, M.D. LOND., M.R.C.P.,
PHYSICIAN TO THE QUEEN'S HOSPITAL.

M. T., a female aged 47, a machinist. She has had two miscarriages and four living children. Her father died of diabetes, mother of dropsy. The patient was quite well till fifteen years ago, when she is said to have had syphilis (from her husband). She has had great trouble. There is no history of drinking. Ten years ago she began to drawl in her speech, and her eyes were puffy; this has continued up to the present time. The catamenia have ceased; all her children were born prior to the onset of her present illness. Her face looks œdematous, but does not pit on pressure; the skin has a translucent appearance, with a pinkish tinge on each cheek; there is considerable swelling of the upper eyelids, but no pitting. The hair is scanty and dry. The tongue is large and pale, and is

moved slowly, there is no enlargement of the uvula or tonsils. The skin is dry everywhere, and rough with desquamation in places; the hands are swollen, and the legs also are larger, but do not pit on pressure. The nails are normal.

The patient says she is always better in warm weather —by this she means that she can move about better.

The patient answers questions slowly, and slurs her words, she speaks as if there were something in her mouth. There is no mental deterioration to be perceived, and the patient seems to be remarkably placid, and never gets excited or cross. She walks slowly and is feeble, but there is no dragging of the toes or inco-ordination of movements, but she is slow in all her movements. The reflexes are normal, except that the patella is diminished. The supraclavicular regions are very prominent. Localisation of sensation is normal, but the power of distinguishing two points of contact is impaired. There is slight analgesia and retardation of sensory conduction. The viscera are apparently healthy. The pulse is slow (60), and the temperature is subnormal, rarely being over 97° F.; but whenever she is examined, and if she is made to move about quickly, the temperature rises. After being shown at a medical meeting, her temperature was 100° F. The patient suffered severely from occipital headache before admission. The fundus oculi is normal on both sides.

On testing the nerves, motor points, and muscles, with the faradic current, the responses were found to be much below normal—a contraction, and that a feeble one, can only be obtained by currents which occasion great pain. This is probably due to the bad conducting power of the skin in its very dry condition, and also to its probable infiltration with mucin.

The urine is pale, acid, sp. gr. 1010, contains no albumen, and no casts. Average daily quantity, 70 oz. The thyroid body cannot be felt.

The above notes were taken twelve months ago, since then the course of the disease has been rather remarkable.

The patient was treated with nitro-glycerine, and for some time stated that the medicine did her good; but no good effect could be observed. She also was treated with pilocarpine subcutaneously; the skin acted freely, but no alteration in her condition could be observed.

The urine was examined daily for a month, and no albumen or casts were found.

On August 10th last, she complained of intense pain on the top of the head, was very drowsy, and had to be roused to answer questions. The pulse and respiration were normal. She had two convulsions on this day.

October 12th.—She fell, and fractured her right patella.

January 9th.—The patient was very noisy, in great distress, constantly crying and talking, had delusions as to seeing her friends in the ward. Previously to this the patient had been remarkably quiet and placid.

The occurrence of these nervous symptoms is of great interest; the convulsions, delusions, and transitory attacks of mania go far to prove that the disease is something more than mere mucoid infiltration of the subcutaneous and other tissues.

The patient at present is perfectly rational, and the average amount of urine passed daily is 50 oz., of specific gravity 1010, and containing only 3.9 grs. of urea to the ounce.

ON MASTOID INFLAMMATION AND THE TREATMENT OF OTORRHŒA WITH DRY POWDERS.

BY CHARLES WARDEN, M.D, F.R.C.S.
SURGEON TO THE EAR AND THROAT HOSPITAL.

I OFFER apologies for selecting so very common, well known, and well understood an affection in connection with ear disease; my object in doing so is *first* of all, its frequency; *secondly*, its occasional—if not generally—serious results; and *thirdly*, for the purpose of considering its mode of treatment.

I need not detail its symptoms, they are of course familiar to all, being those of ordinary inflammation in other structures, viz., heat, pain, redness, and swelling; but I will state the history of a case which I select as typical—one going to abscess of the mastoid—although the chief point I wish to advance and hope to prove, is that a vast number of cases, which indicate every evidence and threatening of suppuration, do not suppurate, but, under appropriate treatment, the inflammation is subdued, and the ordinary and generally recognised plan, that recommended by most authors, viz., that of early and deep incision, rendered quite unnecessary and useless.

I have been led to the consideration of this subject also because I have so often witnessed the, what I call, cruel procedure on the part of some surgeons, who are after all only acting on the authority of the leaders in otology.

As to the causes, we may mention the various *catarrhal conditions* of the meatus and tympanum, in which inflammation may spread and extend to the mastoid cells and brain, in which the cerebrum and cerebellum may be attacked, especially the latter; the *exanthemata, external*

injury, abscesses in meat. auditor. extern., polypus, strumous inflammation, etc. The periostitis which accompanies them is characteristic.

Symptoms.—Rigors, furred tongue, quick pulse, increased temperature and severe pain, post-auricular and supra-auricular regions red and swollen; sometimes very rapid tumifaction, which is even erysipelatous, and the sterno-mastoid muscle is at times implicated. I have now an example of this condition, under my care, in a patient who has had a succession of polypi, several having been removed by myself; the attack being induced, in my opinion, by the treatment of the application of dry powders packed in the meatus with cotton-wool; this being one of several that have been brought under my notice, arising from the same cause.

Pus generally escapes through the meatus, and when *abscess* ensues, it produces even projection of the entire auricle, great constitutional disturbance, most intense pain, strabismus, and even, in many instances, ptosis.

The case I have to relate is that of H. E., æt. 40. Strumous aspect, and has strabismus of left eye; the right ear is affected, and he has been suffering from deafness for five years; commenced with pain inside the ear passage, no swelling or heat; six months before had a fall, and fancies he was struck, falling on some bricks, but there is no evidence that the part was bruised; nor was he aware of taking cold; had some treatment, and was tolerably well for a year or more, when he again suffered pain and discharge from inside meatus, which continued for three months; at the expiration of that time swelling began outside, at the back, behind and around the ear, accompanied by heat, pain, and redness; the pain became intense, beyond endurance, when I was requested to see him. On arrival I found enormous swelling of the

mastoid region, with every evidence of suppuration, extending in all directions, radiating from the mastoid all over the face and head on that side, which I at once opened and evacuated a large quantity of pus of a very offensive odour—to his great relief. The wound was kept open and discharged for a month or six weeks, a drainage tube being inserted; which afterwards healed and remained sound and well for seven or eight months, and during that period he was in good health, there being not the slightest pain or even tenderness. At the end of that time he took cold, and all the symptoms returned; intense pain so severe that he was almost beside himself, and could get no sleep. It was again treated by lancing, fomentations, poultices, and opiates. In about a month he recovered from this attack, and again all was well. He then continued right for nine months, when he had another seizure, with the same treatment and result. The discharge from the meatus remained from the first attack. He then continued well for only three months, when he was visited by a fourth attack, which was even more severe than the former ones, but was kept open, after lancing, for a shorter time, and ceased discharging sooner.

During the second attack a polypus formed in the meatus, which I extracted, and it did not grow again, but the discharge still continues.

Hearing is entirely destroyed, and the *membrana tympani* is perforated, but there is no evidence of necrosis. He is now (July 27, 1883) in good health, stronger than he has been for years, and there is complete absence of pain or even tenderness on pressure.

Discharge is less under the instillation of mild astringents, and the ear has continued in a perfectly quiet condition for some months, occasionally feeling a little stiffness in mastication, but not amounting to pain; when,

however, the acute disorder is going on his jaw is entirely fixed, and he can only live on suction.

Now this is about the usual history and course that mastoid abscess runs, but there are vast numbers of cases of inflammation of the mastoid which do not go on to suppuration, and which *ought* not, if properly treated, and this I emphatically affirm.

My plan of treatment on detecting pain and tenderness over the mastoid and around the ear, is first to paint with a tolerably strong solution of nitrate of silver (gr. 40 ad ℥i), or I often try first the lin. Pot. Iodidi c. Sapone, having previously applied two or three leeches, if much redness and swelling, followed by fomentation; sometimes threatening symptoms are entirely averted by liniment of opium and belladonna; if, however, the symptoms are not thus mitigated, of course the treatment by poultices, fomentation and opiates have to be resorted to, but I have found from considerable experience that in nine cases out of ten, those remedies are sufficient to cut short the periostitis and to check the progress of inflammation, and also prevent suppuration; avoiding thereby any necessity for incision of the periosteum, and the patient also escaping, what I take to be, a severe mode of treatment.

As to the treatment of Otorrhœa by the aid of dry powders :—

My late lamented and much respected colleague at the Birmingham Ear and Throat Infirmary (Dr. Hunt) some time ago, wrote a very elaborate and original Paper on this subject, which appeared in the Medical Review. The plan he adopted and therein described was to cleanse the ear and well dry it with cotton wool, then with an insufflator to introduce in the meatus a little of whatever powder he considered most suitable to the

particular case under treatment; he then simply placed, loosely and lightly, a small quantity of cotton wool in the meatus to prevent the powder falling out, and this was cleared out every other day and renewed. Now this system of treating *otorrhœa* has been adopted and carried out by myself since, and even before that period, and has proved serviceable and very useful in my hands, and it is also perfectly free from danger; but there is a practice followed by some Surgeons of stuffing the meatus with various powerfully astringent powders and closely packing them with cotton wool, ramming them down and leaving them there for a long period, which I consider fraught with the greatest danger, and during the last year I have had three sad illustrations of the serious results arising therefrom; where the discharges, failing to find a free exit externally, have extended to the mastoid cells, producing severe inflammation, caries and necrosis of bone, burrowing onwards, carrying destruction in its course, and at length ulcerating through the dura-mater to the brain, ending in cerebral abscess and death.

The powders generally employed are boracic acid, tannic acid, gallic acid, talc, alum, zinc, copper, lead, iron, iron-alum, &c., &c., &c.

THE TREATMENT OF COMPOUND DEPRESSED FRACTURE OF THE SKULL.*

BY GILBERT BARLING, M.B. LOND., F.R.C.S. ENG.

My observations this evening will be principally limited to the consideration of operative interference in cases of compound fracture of the skull, and to one sequela of these injuries, viz., to intra-cranial abscess. My excuse for bringing these subjects before you is dual—firstly, because I have had unusual opportunity of observing head injuries and their results; and secondly, because in many cases difference of opinion would arise as to the treatment to be adopted; *i.e.*, whether any operation should be undertaken or the patient left alone I believe this difference is much to be regretted, and that to it much of the fatality following operations for fractures of the skull is due. To put the matter briefly, there are two courses sometimes open to a surgeon, either to operate at once when there are no symptoms, or to wait until symptoms arise, and then interfere; and it is my intention specially to draw your attention to the mortality following deferred operations.

Now I hope it will not be assumed that I advocate trephining if a patient has a scalp wound with a graze or groove, or even fissure of the underlying bone. About such injuries as these there is of course no dispute; everyone will probably agree that they should be left alone in the absence of symptoms; and surgical opinion is probably as unanimous upon the necessity for immediate interference in depressed fractures with evident comminution, and in the variety known as punctured fractures. But if we arrange compound fractures of the skull in a

* Read at a meeting of the Midland Medical Society.

series, having at one end the slight injuries first mentioned, and at the other end the severe ones just alluded to, we have between the two our debateable ground, and the cases included may be usefully grouped into three classes, as follows:—(1) Compound depressed fractures without evident comminution; (2) *Incised* compound fractures penetrating both tables, but without depression; (3) Compound fractures in which it is doubtful whether the inner table is injured.

To show the position taken up by those in favour of deferred operation in the absence of symptoms, I will quote the summary given in a popular text book of surgery; the words are—"It thus appears that in simple or compound uncomminuted depressed fracture from a local injury no operative interference is called for unless associated with *marked* symptoms of compression of the brain." So it will be seen that all the three classes I have just defined are included in this dictum, and by it operative interference is allowable only when marked symptoms have arisen. A little further on the author states that of 51 operations at the Hospital he is attached to, only 12 recovered; a result which, to my mind, is not surprising if his advice is acted upon, but it is undesirable that these numbers should be used as an argument to deter surgeons from operation because of the high mortality which ensued in the cases quoted, for it is a fair inference that they were operated upon only in the presence of "marked symptoms of compression."

I believe that the danger of trephining has of late years been exaggerated, and this because death following operation has been attributed to the operation, whereas it would more correctly have been ascribed to the delay in interference, that is to the waiting for symptoms. In a few words I will state the course I advocate in the three groups I have arranged.

In compound depressed fractures without evident comminution, I would trephine immediately whether symptoms existed or not. If both tables are driven in there is always an element of danger in the pulsation of the dura mater against ragged bone edges, and although from the surface comminution is not apparent, it will often be found on removing the depressed part, only a spicule of bone perhaps, but occasionally wounding the dura mater, and in any case likely to set up meningitis. The great question is what course saves most lives, operating or waiting, and to answer this we must first enquire whether the operation of trephining is a dangerous one or not. To say that it is free from risk is unjustifiable, but I hold that, in the absence of wound of the dura mater, and with the most scrupulous care in dressing and after treatment, the mortality should be very small. Mr. Walsham, in an excellent paper upon trephining for traumatic epilepsy, gives a mortality of from 10 to 14 per cent., but expresses the opinion that this rate is higher than it would be if the statistics were compiled from cases operated upon in recent years, and I agree with him. But even if it be granted that the mortality of trephining *per se* is as high as 10 per cent., we must consider in conjunction with it the death rate in deferred operations.

The most strenuous supporters of the practice of waiting for symptoms can hardly deny that early operation would at times prevent the fatal issue that follows their late operations; and anyone examining the accounts of such cases will be struck by the very high mortality, which I do not think it would be an exaggeration to state at much above 50 per cent.: so that we have to hold the balance between the small risk we expose patients to by trephining them immediately and the large risk that some of them will run if they are trephined only when symp-

toms have supervened. I believe that the safety of the largest number of patients will be secured by adopting the rule of immediate trephining in all compound depressed fractures implicating both tables, freely acknowledging that occasionally patients will undergo operation who would have recovered without it.

Of incised fractures with penetration of both tables I will merely say, that they approximate so closely in their characters to punctured fractures that the rule applied to the latter should also apply to the former. We have now left cases in which it is not clear whether the internal table is injured. If this cannot be determined, I am of opinion that the safest course to pursue will be to remove part or the whole of the fractured outer table, so that a definite conclusion may be arrived at. If the internal table be intact, well and good; if it be depressed it should be removed.

It will be considered that my most effective advocacy of early operation will be, not in giving my opinions, but in quoting cases bearing upon the question under discussion; and I submit for consideration an abstract of 19 cases, in all of which some operation was performed; and for my purpose it does not matter whether the trephine was applied or whether the elevator, saw, or forceps were used. Of these 19 patients 10 died and 9 recovered, that is a mortality of just over 50 per cent.; and this may be considered a good result; but an analysis of these cases brings out two important points, they are—the difference between immediate and deferred operations, and the difference between cases where the dura mater is wounded and when it is uninjured. If the tables be referred to, it will be observed that in 9 cases of immediate operation, when the dura mater was entire, all recovered; whilst in 4 cases of deferred operation, the dura mater

being entire, all died. Again, of 13 cases operated upon, the dura mater being entire, 9 recovered and 4 died; whilst in 6 cases where the dura mater was wounded, all died; and although the list is too small to have statistics founded upon it, I believe it will be granted that the figures are very suggestive. I regret that I have not been able to extend the number of cases, but it is difficult to obtain sufficiently accurate details to enable one to tabulate them.

The causes of death are three—meningitis, cerebritis, and intra-cranial abscess;* sometimes occurring separately, at others combined in various degrees. I do not intend to detain you by considering meningitis or cerebritis, they are generally such inevitably fatal conditions, but in intra-cranial abscess much more can be hoped for from treatment. Referring to the abstract, it will be noticed that intra-cranial abscess happened three times. One patient, whom I show here to-night, has recovered, the other two died; and it will probably be of interest if I give shortly the details of these three cases.

The first is No. 7, col. 1, a boy aged 13, trephined for a compound depressed fracture of the left parietal bone towards its posterior part, the dura mater was uninjured; the patient progressed well for five days when he had convulsive twitching of his right extremities, and occasionally gave vent to screams such as occur in meningitis. From this time until the sixteenth day after operation he screamed at intervals, but otherwise he appeared to be progressing well; on the sixteenth day, however, he was irritable, complained of pain in the frontal region, vomited once, and when the dressing was changed it was noticed that the dura mater did not

* Intra-cranial abscess includes, abscess of the brain, localised meningeal collections, and pus between the dura mater and the bone.

pulsate. Later the same day he again vomited, was very drowsy and quite collapsed, his pulse being only 50, and his temperature, which for some days previous had been about normal, was only 97°. The dura mater was incised, about ℥ss of pus let out, and pulsation returning, the dressing reapplied. When dressed the next morning pulsation had disappeared, so a pair of dressing forceps were passed through the hole in the dura mater and a small drainage tube introduced, when about three or four drachms of pus ran out; the pulse rate had then increased to 80. The tube was retained for twenty-four days, the patient steadily improving, and he is now, four months since the trephining, quite well. The exact situation of this abscess I have not attempted to define, I mean as to whether it was superficial to the cerebrum or within it.

The second case is No. 4, Col. 2, a female aged 23, who was trephined in two places, on the vertex and behind the left ear; from the latter a small quantity of brain matter escaped. Excellent progress was made until the seventeenth day when the patient complained of pain in her head, vomiting set in, and the temperature, which had until now been normal, rose to 101°, but sank again to normal. The vomiting however persisted, and on the twentieth day the temperature rose to 103°, nor did it again resume its former level, but varied from 102° in the evenings to 99° in the mornings, until her death on the thirty-second day. The pulse rate quickened with the elevation of temperature. There was no paralysis until the twenty-fourth day, when slight facial paralysis was observed on the left side. On the thirty-first day her condition was evidently desperate, so in the hope that some localised collection might be found, it was determined to explore the

trephine wounds. That on the vertex was first examined, but on opening the dura mater only a little blood clot was found, so attention was next directed to the wound behind the left ear; this was very close to, if not over the lateral sinus. A puncture being cautiously made it was found that the sinus was beneath, and a small sponge having stopped the hæmorrhage any further exploration was desisted from, and the patient died the next day.

Post mortem.—On the vertex a small amount of blood clot was found, but it was undergoing absorption. Beneath the fracture behind the left ear an abscess existed, passing from the surface of the brain into the left lateral ventricle, which was full of pus. The lateral sinus was patent, but a puncture through it would have fallen upon the abscess.

The third case is No. 1, of col. 3, a boy of 9, admitted with a compound depressed fracture of left parietal; symptoms arose twenty-four hours after admission, they were drowsiness and paresis of the right extremities, so trephining was performed, and the dura mater was found entire. The history of the first few days relates that the patient was drowsy, at times irritable, that the right pupil was dilated, the paresis of the right extremities remaining the same, but on the fourth day facial paralysis on the right side supervened. Later, convulsions of the right arm and right side of the face occurred. The convulsions passed away, the paralysis remaining, but otherwise there was a gradual improvement until the thirty-first day when the patient had a general convulsion, followed by unsciousness and stertorous breathing; death ensued on the next day. The temperature, raised to a little over 100° before operation, remained at about that height for some days and then became normal, and hardly varied from that at the time of death.

Post Mortem.—The dura mater was seen to be distended at the trephine wound, on opening it the convolutions were found flattened. An abscess, containing some ʒij of pus, was discovered in the left frontal lobe, anterior to the ascending frontal convolution, and some distance in front of the trephine wound.

From consideration of these and of other cases it is evident that there is no one symptom or sign pathognomonic of cerebral abscess, but there are many indications, mixed in the most varying combinations, which point strongly to its presence; such indications are, persistent vomiting, slowing of pulse, variation in temperature, altered mental function, localised paralysis, with or without convulsions, and distension of the dura mater with absence of pulsation; and I will just recall to your mind the combinations existing in the cases I have related. In the first there was vomiting, irritability, followed by dulness, slow pulse and low temperature. In the second there was persistent vomiting, followed by facial paralysis and elevation of temperature with morning remissions. In the third there was early paralysis on the opposite side, which became more marked, convulsive movements at times of the paralysed parts, followed by one general convulsion, with unconsciousness and stertorous breathing. It is difficult to estimate the value of variations in temperature as an assistance to diagnosis of intra-cranial abscess. It is clear that the temperature may be normal or even sub-normal when this condition exists, but it is probable that at some time during the progress of the case elevation of temperature will be observed, which will indicate the time at which the purulent collection originated.

One circumstance worthy of note in all three cases is that the time at which death occurred or the abscess was

relieved, was prolonged much beyond the time at which death generally occurs from meningitis or cerebritis. But something more is needed beyond diagnosing the presence of pus within the cranium; it should, if possible, be localised, but this is by no means easy to do, for in some cases the symptoms are too vague to allow of it, and in others the localisation is not correct although pointed to by the symptoms.

In the boy shown here to-night the only indication that the motor centres were affected was a convulsive twitching of the right extremities, and the position of the abscess must have corresponded pretty closely to Ferrier's centres for movements of the upper and lower extremities. In the woman who was trephined in two places there was no evidence by which the abscess could be localised. In the boy who died with an abscess in the frontal lobe the paralysis pointed definitely to an affection of the left motor area, and the trephine wound was in close correspondence, but the *post mortem* demonstrated that the abscess was quite in front of the motor area.

For the relief of intra-cranial abscess the best course to pursue I believe to consist in exploration of the dura mater beneath the trephine wound as the first step; failing to find pus, if the convolutions were flattened here, the brain should be punctured, but if no flattening exist the choice would lie between trephining in any situation that local paralysis or convulsion might indicate as affected, or in passing a director from the original trephine wound towards the centres which are possibly implicated, taking care of course to avoid the more vital parts of the brain. The condition of patients is so hopeless that any extra risk incurred appears to be justified.

Disappointment will at times undoubtedly follow these measures, and I will give an instance of this in Case 5,

col. 2, a girl aged 12, trephined for a compound depressed fracture of the frontal bone, over the left eye, the dura mater being lacerated. On the second day the temperature was raised to 102°, but soon sank to normal; it rose again on the eighth day, gradually increasing to 106° on the day of death. With the elevation of temperature came screaming and complaint of pain, followed by dulness and paralysis of the right extremities. These things were complicated by a small hernia cerebri. On the tenth day, the patient's condition being regarded as hopeless, it was judged right, in the face of the localised paralysis, to determine whether there was any collection of pus which could be relieved, and a director was passed into the hernia cerebri, when about half a drachm of pus escaped. This not being regarded as sufficient to account for the paralysis, the director was passed on to the position of the left motor area, but nothing resulted, and the patient died two days afterwards, apparently neither better nor worse for the examination.

Post mortem.—Around the hernia cerebri the frontal lobe was found much softened, and as the evident cause of the paralysis of the right limbs, a patch of meningitis extending from the longitudinal fissure, over the ascending parietal and frontal convolutions and parts adjacent to them on the left side, down to the base. The route taken by the director was marked by a blood-stained streak.

If I have not wearied your patience, I should like to draw your attention to a few details connected with the operation of trephining. In the first place, the necessity of thorough examination of compound fractures of the skull as soon as may be after their occurrence, cannot be too strongly insisted upon. The evidence obtained by the use of the probe or finger is often

insufficient, so that it is desirable to enlarge the scalp wound until the fracture and the surrounding bone can be actually seen in their true relations to each other. When the trephine is applied everyone will avoid the positions of the venous sinuses, but even if one of them should be wounded, so long as the wound does not implicate the deep surface, probably no great harm will result. I have notes of wound of the sup. longitudinal sinus caused by a slate falling on a child's head; on the removal of a piece of impacted slate, profuse hæmorrhage ensued, which was however easily controlled by the pressure of a sponge, and the child recovered without a bad symptom. The extreme importance of avoiding a puncture of the dura mater it is almost unnecessary to mention, for this lesion adds immensely to the gravity of the prognosis. Too much care cannot be taken in stopping all hæmorrhage before dressing the wound, and in providing ready exit for discharge; the latter it is not always easy to secure, and I believe the best method of obtaining it, is not to attempt to bring the soft parts together by suture, but simply to let them lie as nearly in apposition as they will. Whether Lister's dressing or any other be used, all will agree as to the harm likely to be produced by the collection even of a few drops of dead fluid, which will afford a nidus for infective matter to develope in. In conclusion, I take the opportunity of thanking the Honorary Surgeons to the Hospital for their kind permission to make use of notes of cases coming under their care.

IMMEDIATE OPERATION.

DURA MATER ENTIRE.

1. Girl, age 2 years, fracture of occipital, symptoms, cure.
2. Male, age 13 years, fracture frontal, symptoms, cure.
3. Girl, age 9 years, fracture parietal, no symptoms, cure.
4. Male, age 15 years, fracture frontal, no symptoms, cure
5. Male, age 8 years, fracture parietal, no symptoms, cure.
6. Girl, age 18 years, fracture parietal, no symptoms, cure.
7. Male, age 13 years, fracture parietal, no symptoms, cerebral abscess, cure.
8. Male, age 43 years, fracture parietal, no symptoms, cure.
9. Male, age 29 years, fracture parietal, no symptoms, cure.

Nine cases, all recovered. In case 6 there was no depression; all the other fractures were depressed.

DURA MATER WOUNDED.

1. Man, extensive fracture of vertex, died, no symptoms.
2. Male, age 9 years, fracture frontal and parietal, symptoms, died.
3. Male, age 45 years, fracture frontal bone and of base, brain lacerated, no symptoms, died.
4. Female, age 23 years, fracture parietal and of parietal and temporal, brain injured, trephined in two places, cerebral abscess, died.
5. Female, age 12 years, fracture of frontal, no symptoms, died.

Five cases, all died. All the fractures were depressed.

DEFERRED OPERATION.

DURA MATER ENTIRE.

1. Male, age 9 years, fracture parietal, symptoms set in, operation in 24 hours, cerebral abscess, died.
2. Male, age 44 years, symptoms set in, fracture parietal, operation in 12 hours, died.
3. Male, age 63 years, fracture parietal, symptoms set in, operation in 30 hours, died.
4. Male, age 35 years, fracture parietal, symptoms set in, operation in 30 hours, died.

Four cases, all died. In case 4 there was no depression; blood was found between dura mater and bone. All the other fractures were depressed.

DURA MATER WOUNDED.

1. Male, age 15 years, extensive fracture parietal, obscured by huge hæmatoma, symptoms set in, operation in 48 hours, brain much torn, died.

Total number of cases 19, with 10 deaths.

ASCLEPIAS INCARNATA.

BY J. HOSACK FRASER, M.B. EDINBURGH.

A brief communication appeared in the Therapeutic Gazette (American) on the 15th day of November, 1883, in which it was stated that the Asclepias Incarnata, or, as it is commonly known, the white Indian hemp, had the reputation among the people of Ohio of possessing remarkable diuretic properties. Shortly afterwards a preparation of this drug was sent to me by Messrs. Parke, Davis, and Company, of New York, and I have now been using it for the last three months with considerable success in a number of cases. My clinical observations have led me to the conclusion that its physiological actions may be stated as follows :—

The Circulatory System.—It stimulates the cardiac contractions, and increases the blood pressure. For two hours after the administration of forty minims of the liquid extract, there is an increase in the strength and volume of the pulse. It steadies the cardiac contractions, and assists in restoring the rhythm of the pulse when any irregularity exists. The stage of stimulation is sometimes followed by slight depression of the circulation, and in order to maintain its stimulating effects, it should be repeated at intervals of three hours.

The Urinary System.—It is a speedy, potent, and reliable diuretic. I have found it to succeed admirably in cases where the best known diuretics have entirely and signally failed. It is invaluable in all forms of dropsy, but especially so in dropsy of cardiac and renal origin. I believe that it acts on the kidneys in precisely the same manner as digitalis.

One great advantage which it possesses is that it

does not cause any gastro-intestinal disturbance; on the contrary, it frequently acts as a stomachic.

The root is the part which is used in medicine, and is said to possess all the medicinal properties of the plant. It may be administered either in the form of an infusion, or a fluid extract. The latter preparation should be given in ʒss to ʒi doses every three hours. Smaller doses are useless.

REVIEWS.

ON BEDSIDE URINE TESTING.*

THIS little book contains an account of the various methods invented or perfected by Dr. Oliver for testing urine by means of test papers. We have tried these papers and cannot recommend them. We think the practice of bedside urine testing is unnecessary and untrustworthy. If an examination of the urine is worth doing at all, it is worth doing well; and it can be only done properly and thoroughly at home, with all needful appliances.

We do not believe that anything is ever lost by post-poning such examinations, and we protest against the traditional opinion that a decision on all points must be arrived at by the bedside. But it may be said that these papers are not meant to take the place of the more careful subsequent testing, but afford a ready means of confirming suspicions formed at the time. The answer to this is, that the tests recommended are fallacious. In chronic diseases it surely cannot be of urgent importance to determine these questions at the time of visit; in acute

* On Bedside Urine Testing, including quantitative albumen and sugar. By Geo. Oliver, M.D. Lond. Second Edition. London: H. K. Lewis. 1884.

diseases, on the other hand, the discovery of a trace of albumen would have no significance, and even the presence of sugar would not influence the treatment if the general features of the case had been duly considered. The tests for albumen are open to the objection that they are not simply tests for serum albumen, which we maintain is the only proteid found in the urine which has any definite pathological significance; and even the importance of this cannot be properly appreciated until a microscopical examination of the urine has been made.

His most highly commended test is a mixture of mercuric chloride and potassium iodide. Most of our readers will recollect that Mr. John Greene, of this town, some years ago published a paper on a body which he called leth-albumen, which was present in nearly all the urines he tested, healthy and morbid, the precipitant used being mercuric chloride; it is therefore obviously a test of no value to determine the presence of pathological kinds of albumen.

Sodium tungstate also admittedly throws down peptones which are not yet known to have any pathological significance in the urine.

It has yet to be proved that minute traces of serum albumen are of any clinical importance. We must not forget that symptomatology is a purely empirical study, and that while the presence of albuminuria, *under certain circumstances*, reveals a great deal of valuable information, we are unable to estimate the significance of the presence of albumen in the urine *per se*, without reference to quantity. Pavy has lately shown that a trace of sugar is a physiological constituent of the urine, and Leube takes the same view respecting albumen. Only a man wedded to a foolish dogma, such as that all albuminuria means kidney disease, could welcome this refinement of tests without any corresponding advance in the physiological, pathological, and clinical knowledge, upon which their use depends.

The value of Indigo-carmine recommended by the author as a test for sugar has yet to be determined.

If we protest somewhat energetically against what we believe to be clinical chemistry gone mad, we do not the less recognise the ingenuity and industry with which Dr. Oliver has striven to render assistance in an important department of his profession.

We may most fittingly complete this notice by quoting the opinion of Dr. Roberts, of Manchester, expressed in his recent speech in the discussion on albuminuria at the Glasgow Pathological and Clinical Society (vide Glasgow Med. Journal, March, 1884, p. 208):—"I soon found that the new tests possessed extreme sensitiveness; but I also found that they had all this serious drawback, namely, that they gave a reaction frequently with normal urines. With urines that contained a large or moderate amount of albumen, they yielded a reaction which was quite unmistakeable; but with urines that contained only a small quantity or only traces of albumen, their reactions required to be controlled by heat and nitric acid before they could be accepted as conclusive of the presence of albumen. I further found that the old tests, heat and nitric acid, but especially the heat test, possessed, when performed with certain precautions, a delicacy, a certainty of action, and a freedom from fallacies, which rendered them distinctly superior to any of the new tests for ordinary clinical work."

MEDICAL FASHIONS IN THE NINETEENTH CENTURY.*

We suppose most people are philosophers enough to recognise that there are two factors constantly operating, the resultant of which determines the onward march of the world in politics, science, art, etc. These factors are innovation and criticism. To an onlooker watching the course of events, for a short time, the successive phases presented in any one of the departments named may appear to be meaningless waves of human error, but we apprehend that to those who take a wider survey, and who look a little deeper into what is passing, a real meaning discloses itself, and a gradual progress along the whole line is manifested. Dr. Tibbits unfortunately takes up the point of view of the former kind of observer. He sees in the successive phases of medical art and science which he reviews during the last fifty years little but meaningless "fashions." He regards anæsthetics as

* Medical Fashions in the Nineteenth Century. By Edward T. Tibbits, M.D. Lond.

a luxury, and their frequent use a "most pernicious custom;" he thinks scores of lives have been sacrificed to chloral; that digitalis is a depressant of the heart's action; and that a sea voyage is the best restorative for pulmonary invalids. He falls foul of antiseptics, not having been able to withstand the persuasive power of Mr. Savory's eloquent address at Cork; and he derides the notion that bacteria have been proved to be in any case the cause of disease.

We of course admit that the rage for novelty constantly leads mankind into error, and that one of the drawbacks of a cheap and popular press is the rapid dissemination of every alleged discovery, especially if it has any bearing upon a matter of great general interest. Want of scientific training makes the public and, to some extent, a portion of our own profession unable to appreciate the proper mental attitude to assume towards a biological induction based upon a limited number of experiments and observations, which is at any time liable to be upset by the discovery of further data. Yet, unless we are to give up biological investigations altogether, we must accept, provisionally, the conclusions towards which the facts in our possession point, and we are justified in using them cautiously in the practice of our profession. What right has Dr. Tibbits to assume finality for the opinions of 50 years ago or any other period? Are not the opinions to which he points with reverence and regret merely phases of human thought, and are not his own opinions after all the outcomings of a finite intelligence?

We do not doubt that it is the duty of every practitioner to keep himself, as far as he is able, abreast of the progress of scientific investigation in all those departments which bear upon his business in life; not to do so is to be unmindful of the trust reposed in him by his patients, who certainly expect that he will give them the benefit of any new light that living workers and thinkers may throw upon the problems connected with the relief of their sufferings. That he should exercise a wise discretion in so doing goes without saying. He is the best practitioner in our opinion who, being well-grounded in the teachings of the past, recognises his own shortcomings and is ready to accept, with becoming caution, the suggestions made by his contemporaries.

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This preparation having been introduced by us, we can vouch for the genuineness of the crude drug employed. Many spurious varieties of the bark are in the market, the unsatisfactory results of which throw some doubt on this excellent remedy, and Physicians are requested in every case to specify *our* preparation, in order to secure the desired results. We do not get our supplies from dealers, but employ our own agents who supervise the gathering and drying of the bark, and are thus able to guarantee an article, the use of which will be followed by all the results which are claimed for it. With reference to substitutes being sold, we beg to quote from an article in the Liverpool Chir. Med. Journal, July, 1882:—"My reasons for making, what may seem an invidious selection is that a prescription made up apparently with a different preparation proved inert."

Rhamnus Purshiana has gone through an ordeal which nothing but its inherent worth could have enabled it to pass through, and it is now universally admitted to be the most reliable agent in the hands of the Physician for the treatment of chronic constipation. To obtain the full results, the fluid extract Cascara Sagrada must be prescribed in small doses, repeated 3 to 5 times a day and oftener, gradually increasing the dose until a *normal* passage is obtained, after which it may be gradually decreased.

CASCARA CORDIAL, is a compound of Rhamnus Purshiana (Cascara Sagrada), Berberis aquifolium, spirits, sugar and water, sufficiently flavoured with aromatics to cover the peculiar bitter taste of the Cascara Sagrada. The exact formula of Cascara Cordial is given on every bottle. The Cordial contains less Cascara Sagrada than the fluid extract and is thus rendered less bitter and more agreeable to take than the latter, a sufficient quantity, however, of the basis has been retained to ensure its characteristic effects. The dose of the Cordial is from one to four teaspoonfuls 3 or 4 times a day, according to effect, and doses should be gradually increased and decreased in the same way as those of the fluid extract. The temptation to give the preparation in sufficient quantity to produce catharsis must be resisted. Our object in the preparation of Cascara *Cordial* is to relieve the Physician of the difficulty of prescribing a combination which will do away with the objectionable taste of the constituent drugs, mainly that of the Cascara Sagrada, and to supply an article with a short name for convenient use in prescriptions. In soliciting a trial of our Cascara Cordial at the hands of the Medical Profession of Great Britain, we do so with full confidence, based on the experience of the profession of the United States during the past three years.

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THE PEDIGREE OF DISEASE.*

THESE six lectures on temperament, idiosyncrasy, and diathesis, were delivered in the Theatre of the Royal College of Surgeons in the Session of 1881, and were reported at the time in the journals, so that in the main their contents are known to our readers. They treat of matters to which, perhaps, Mr. Hutchinson is right in thinking too little attention is given in modern medical thought and doctrine. He discards temperament as being difficult of definition and, so far as it can be analysed, dependent rather upon racial peculiarities than upon pathological conditions. Idiosyncracy, on the other hand, is an undoubted fact, of which he gives numerous illustrations. The major part of the lectures is devoted to the consideration of diathesis, especially the catarrhal, the rheumatic, and the scrofulous. There seems to be some contradiction in the description that first demands, on page 122, that whatever is the result of catching cold shall be termed catarrhal, and that rheumatism is only the catarrhal diathesis affecting the joints, and on page 134 speaks of the three universal diatheses, the catarrhal, the rheumatic, and the scrofulous. If the rheumatic diathesis does not include acute rheumatism it is a sadly misleading term. There are many other points in which Mr. Hutchinson's statements and opinions are open to objection, but these lectures are eminently suggestive, and none the less useful if they provoke controversy by a clear one-sided statement of difficult questions.

COFFEE AND TEA.†

WE much wish this lecture could be read by every intelligent housewife in the country, we should then, perhaps, obtain more frequently a good cup of coffee instead of the nauseous decoction which too often passes under its name, and which would justify the terms used in the Petition against Coffee of 1674, in which it was called "a base, black, thick, nasty, bitter, stinking puddle water."

* The Pedigree of Disease. By Jonathan Hutchinson. F.R.S. London: J. and A. Churchill. 1884.

† Coffee and Tea. A Lecture given at the Parkes Museum, by G. V. Poore, M.D., etc. London: H. K. Lewis. 1883.

ANNALS OF CHOLERA.*

THIS interesting book is a praiseworthy attempt to collect in a small compass all that has been written upon cholera previous to the year 1817.

Dr. Macpherson traces the accounts from the writings of early Greek, Sanscrit, and Chinese writers, through the Arabians to the sixteenth century; quotes the descriptions of the outbreaks in France and Italy during that century, and those of England, Holland, and Brazil in the next. In the eighteenth century Germany suffered, and the disease appeared in America.

The remainder of the book is taken up with an account of cholera in the east from the year 1500 to 1817. The author is especially careful to commit himself to no opinion, and seeks to be regarded as an unbiassed writer whose contribution to the problems of cholera is an impartial review of its history from the earliest periods to our own times.

ANNUAIRE DES SPÉCIALITÉS MÉDICALES ET PHARMACEUTIQUES. PARIS, 1884.

THIS is a curious sort of advertising directory, containing a list of medical men, French, German, English, and American, with their addresses and the titles of their writings, apparently very incomplete, and with respect to English practitioners, incorrect. Also a list of specialists in various departments. The same kind office is performed for the veterinary surgeons. Then follows a list of medical journals, with three or four exceptions, all French. There are lists of mineral waters, maisons de santé, chemists' shops, etc. etc. We do not pretend to have given a complete list of its contents, but sufficient to indicate to our readers the general scope of the work, which we trust will not find an enterprising publisher to imitate it on this side of the Channel.

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* Annals of Cholera from the Earliest Periods to the year 1817. By John Macpherson, M.D. London: H. K. Lewis. 1884.

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This improved arrangement will recommend itself to the Physicians and Surgeons of Hospitals and Infirmaries for Teaching purposes, and as affording a much more convenient means of examination and the use of Surgical Appliances, and for explaining to the Students the peculiarities of the case under consideration, as the Medical Man is relieved of the fatigue of bending over the Patient.

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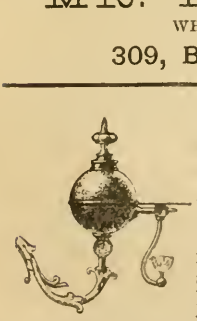

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British Medical Journal, June 23rd, 1883, says—"We know of instances in which its administration has been attended with considerable benefit."

KREOCHYLE is obtained from the best English Beef, it contains all the meat extractives, and in addition the whole of the soluble Albumen of the Meat in an uncoagulated form, which stamps it as distinct from every other form of meat extract, none of these containing even a trace of soluble uncoagulated Albumen.

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Kreochyle has been tested for upwards of 12 months in some of the London Hospitals, and several eminent medical men have testified to its great value as a food and stimulant. It has been used in several severe forms of illness and in *no one case has the patient failed to be able to retain and digest it.*

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The dose recommended in severe cases is for an infant up to 6 months one teaspoonful every 3 or 4 hours, above 6 months a dessert spoonful; for adults either a dessert or table spoonful repeated every 2 or 3 hours. Convalescents half an ordinary-sized wine glassful morning and evening.

The Kreochyle Company beg to state that they will have great pleasure in forwarding to any medical man a sample bottle free of cost, and by answering any enquiries that they may desire to make, on application to—

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THE SOUTH AFRICAN MEDICAL JOURNAL.

OUR brethren in South Africa may be congratulated on the appearance of the first number of their journal, which will be published monthly. Besides editorials it contains two original articles—Two Cases of Femoral Hernia, requiring operation, by J. B. Greathead, M.B., C.M.; and Cadaveric Alkaloids, or the poisonous products of decomposition, by John Drummond, L.R.C.P.; both being quite up to the average of such communications. This journal will co-operate with the newly formed South African Association. We wish the new venture every success.

REPORTS OF SOCIETIES.

MIDLAND MEDICAL SOCIETY.

Special and Ordinary Meeting, January 23rd.

Mr. ROSS JORDAN, in the Chair.

Relations of Ovulation to Menstruation.—Mr. Lawson Tait read a paper on "Relations of Ovulation to Menstruation." He gave an historical sketch of the literature of the subject since 1843, the date of the publication of Dr. Ritchie's papers, and observed that although Ritchie's discoveries had been amply and frequently confirmed, the text-books still reiterated the mistaken view that menstruation was the equivalent of the oestrus or ~~reet~~, and that it was due to the ovarian excitement of the ripened follicle. He next gave a series of observations derived from his surgical practice, in which it was shown that in forty-nine observations there was evidence of the concurrence of ovulation and menstruation in nine only, whereas in forty cases the evidence was either negatively (fifteen cases) or positively (25 cases) against the ovulation theory of menstruation. It was

therefore impossible to maintain a theory which was controverted by nearly 82 per cent. of evidence. Mr. Tait showed a large soft œdematous myoma, without pedicle, removed successfully from a woman aged 43; also a specimen of abscess of right ovary.

Acute Atrophy of the Liver.—Dr. Suckling showed a specimen of acute atrophy of the liver. The liver weighed 25 oz., was soft and flabby, with wrinkled capsule, and was yellowish in colour, with patches in red. During life there was marked jaundice, delirium and coma, obstinate constipation and vomiting, with no enlargement of the spleen or fever. The jaundice was of three weeks' standing. Crystals of tyrosin were found in the urine. Dr. Suckling also showed a living case of traumatic myditis caused by a fall. There was displacement of the first and second lumbar vertebræ backwards, and paralysis of the lower extremities below the knees, the muscles being completely destroyed.

Epithelioma of Cicatrix.—Mr. Chavasse exhibited a large epithelmatous mass occurring in the cicatrix of an old burn situated in the anterior surface of the upper third of the forearm, and extending to the lower third of the arm. The patient was 19 years of age, and the burn was received when she was seven years old. Fourteen months before admission to the hospital the cicatrix had been pinched, and rapid growth followed the injury. The limb was successfully removed immediately below the shoulder joint.

Epithelioma of Bone.—Mr. Jordan Lloyd showed a specimen of epithelioma of bone. The affected tibia was enlarged to twice its natural size, and was covered in patches with small osteophytes. At the centre of its anterior border and inner surface was a fungating mass as large as a turkey's egg. The fibula was enlarged, and the two bones anchylosed together at their lower third. The interosseous membrane was ossified in parts. The specimen was removed from a man 42 years old. He had had chronic ulceration of the leg for twenty-five years, but was able to work until six months ago, when the sore began to exhibit this cauliflower-like growth. There was several enlarged glands in Scarpa's space. Amputation was performed below the knee, and the wound healed soundly in three weeks.

Rheumatic Fever with Hyperpyrexia.—At a meeting held on the 6th February, Dr. Carter read a paper on "A Case of Rheumatic Fever with Hyperpyrexia," which was successfully treated by the graduated bath. There had been three previous attacks of rheumatism, in the course of which the mitral orifice of the heart had become affected. The temperature rose suddenly to 106° F., was brought down by the bath to 99·5° F., and never rose again above 102° F. There was marked delirium, the onset of which preceded the hyperpyrexia by nearly twenty-four hours.

The Influence of Civilisation on Childbirth.—Dr. Malins read a paper on "The Influence of Civilisation on Childbirth." The customs of various tribes and countries in the conduct of natural labour were briefly sketched, and the difference in the mortality for respective classes of human and animal life dwelt on. The influences of an adverse kind were shown to be mainly due to the adaptation of the human female to the erect position; the complicated structure of the human placenta, and the diseases engendered in early life, especially of the bones. Dr. Malins showed a specimen of a fibroid polypus of the uterus weighing nearly three ounces. The patient from whom it was taken had symptoms for two years thought to be attributable to malignant disease. The polypus was removed with scissors; recovery was immediate. Dr. Malins also showed the ovary and tube taken from a patient, single, age 22, from whom the other ovary was removed fifteen months previously without relief. The ovary was three times the natural size, with numerous cysts. Perfect recovery and complete cessation from pain followed the operation.

Laryngeal Perichondritis.—Dr. Carter showed a specimen of laryngeal perichondritis. Tracheotomy had been performed, which completely relieved the dyspnœa, but the patient died from septicæmia. An ulcer was found on the posterior extremity of the right vocal cord, which had extended to the cricoid cartilage, the periosteum of which was separated from the cartilage by pus. There was no evidence of phthisis or syphilis.

Cholera Kidney.—Dr. Windle showed sections of cholera kidney. There were no bacteria present, but the epithelium cells were very distinct, with large nuclei.

Wednesday, February 20th.

Mastoid Inflammation, and the Treatment of Otorrhœa with Powders by Insufflation.—Dr. Warden read this paper, which will be found printed in full at page 159.

Treatment of Lupus.—Mr. Taylor insisted on the scrofulous nature of lupus, and claimed for patients suffering from it more attention to hygienic details, and recommended the compound syrup of the phosphates and cod-liver oil as the best internal medicines, and the curette as the best local agent.

Dr. Nelson showed a specimen of fatty kidney.

Dislocation of both Shoulder-joints.—Mr. Hugh Thomas showed a case of this injury. The man, aged 55, fell over a kerb stone on his hands, with great violence. He was unable to get up without assistance, and his arms were fixed and numbed. One shoulder was easily reduced, the other with much difficulty.

Congenital Defects of Fundus Oculi.—Mr. Priestley Smith exhibited, by means of his demonstrating ophthalmoscope, two such cases. One case was a coloboma of the right disc, presenting a white circular area, including the disc, but having a diameter three times greater than that of the disc of the other eye. In the second case, the right disc was surrounded by brilliant white radiating patches, due to an extension into the retina of the opaque sheaths of the nerve fibres, which normally stopped short just behind the disc.

Charcot's Joint-disease in Locomotor Ataxy.—Dr. Suckling showed a case. The man, aged 50, had suffered from the symptoms of locomotor ataxia for five years. Three years ago he noticed his right knee to be much larger than its fellow, and it had remained in the same condition. There was great effusion in the right knee-joint, with total absence of pain, and absence of any bony outgrowth; grating could be felt on moving the joint.

MEDICAL NEWS.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.—A meeting of the Provisional Executive Committee of this Society was held at 38, Wimpole Street W., on Thursday, March 6th. The following members were present:—Mr. Sibley, Surgeon-Major Evatt (Woolwich), Dr. Clibborn, Mr. Brindley James, Mr. Major Greenwood, jun., Mr. Radley (Secretary), Mr. E. Noble Smith (in the chair). The minutes of the last meeting were read and passed. The Secretary reported that letters had been received from Mr. J. Bain Sincock (Bridgewater) and Mr. Behrendt (Burringham), stating their inability to attend.

The Secretary presented his Report showing that 300 members had joined, and that the receipts amounted to £185. 7s. 2d. The report was received and adopted.

The Chairman stated that a letter had been received from Mr. Ernest Hart expressing his satisfaction at the progress of the Society, and making suggestions with regard to its further extension, which were unanimously approved.

The Secretary recommended that, as it had been decided after consultation with their consulting actuary, Mr. Neison, to accept members for sick pay only who were unwilling to join for sick pay and annuity combined, the two funds be kept distinct, and that separate tables be drawn and printed showing the rates for sick pay only. This was duly proposed and carried.

A letter was read from Mr. Parsons (Ambleside), asking whether gentlemen retiring from practice after becoming members of the Society were open to receive the benefit of the Society? An answer was directed to be sent in the affirmative.

A communication was read from a correspondent who desired to know if members of the Army and Navy Medical Services, who were liable to be called out of the country on duty, would be eligible as members of the Society. It was decided to reply that the Society was at present too young to undertake the risks this would involve.

The question of holding a General Meeting in London

was discussed, and its further consideration was deferred. A discussion arising out of questions connected with the proposal forms referred to the meeting brought the proceedings to a close.

THE CREMATION SOCIETY OF ENGLAND. — The Council of the Cremation Society of England purchased, in the year 1878, a Freehold site at St. John's, Woking, in Surrey, especially adapted by position for the purpose, and erected thereon a building, with an apparatus of the most approved kind for effecting cremation of the dead. They next tested it by experiment, and found that it accomplished the purpose required without occasioning nuisance of any kind. Since that time the place has been maintained in perfect order, but has not been used, owing to a doubt raised, soon after the date referred to, as to the legality of adopting the process at present in this country. A recent decision, however, of Mr. Justice Stephen, declares that the cremation of a dead body, if effected without nuisance to others, is a legal proceeding. Under these circumstances, the Cremation Society feel it a duty to indicate, without delay, those safeguards which they deem it essential to associate with the proceeding in order to prevent the destruction of a body which may have met death by unfair means. They are aware that the chief practical objection which can be urged against the employment of cremation consists in the opportunity which it offers, apart from such precautions, for removing the traces of poison or other injury which are retained by an undestroyed body.

The following, therefore, are the conditions on which the employment of the Crematorium will alone be permitted by the Council :—

1.—An application in writing must be made by the friends or executors of the deceased—unless it has been made by the deceased person himself during life—stating that it was the wish of the deceased to be cremated after death.

2.—A Certificate must be sent in by one qualified medical man at least, who attended the deceased until the time of death, unhesitatingly stating that the cause of death was natural, and what that cause was.

3.—If no medical man attended during the illness, an autopsy must be made by a medical officer appointed by the Society, or no cremation can take place.

These conditions being complied with, the Council of the Society reserve the right in all cases of refusing permission for the performance of the cremation, and in the event of permitting it, will offer every facility for its accomplishment in the best manner.

We are glad to see that this Society is making a move, as we are sure that many persons are in favour of cremation, but have hitherto regarded it as illegal and therefore impracticable. Its sanitary and economical advantages are so great, and the difficulties of burial are so imperative and increasing, that sooner or later cremation must be adopted by the public authorities.

MITCHELL'S HEMATIN STAINING FLUID.—Finely ground logwood, 2 oz.; sulph. aluminum and potash (potash alum), 9 dr.; glycerine, *f.* 4 oz.; distilled water, a sufficient quantity. Moisten the ground logwood with sufficient cold water to slightly dampen it, place it in a funnel or percolator, packing it loosely, and then percolate sufficient water through the drug until the liquid coming from the percolator is but slightly coloured. Allow the drug to drain thoroughly, and then remove it from the percolator, and spread out on a paper or board to dry. Dissolve the alum in eight fluid ounces of water, moisten the dry drug with a sufficient quantity of the fluid, and again pack in the percolator, this time rather tightly, and pour on the remainder of the alum solution. As soon as the liquid percolates through and commences to drop from the end of the percolator, close the aperture with a tightly fitting cork, and allow the drug to macerate for forty-eight hours. Remove the cork at the expiration of that time, allow the liquid to drain off, and then pour sufficient water upon the drug to percolate through twelve fluid ounces altogether. Mix this with the glycerine, filter, and place in a close-stopped bottle.

In this process nearly all the tannin is removed by percolating the drug with cold water, a menstruum in which the colouring principle is not very soluble, and the subsequent maceration and percolation with the alum solution removes the logwood lake in a state of comparative purity. The glycerine is added simply for its preservative qualities, and this may be still increased by the addition of a few drachms of alcohol to the solution.

The hematin staining fluid thus prepared is a clear, heavy fluid of a deep purplish red colour. It will keep its colour for a length of time, and deposits no sediment. As a staining fluid, used either strong or diluted, I consider it far superior to any other stain I know of.

A few words in conclusion as regards the method of using this fluid. It yields good results when used undiluted, as a quick stain ; but the most excellent results, to my mind, are obtained by placing the tissues in a weak solution (ten drops to two fluid drachms), with warm distilled water, for about twelve hours. This method leaves nothing to be desired, and produces results of surpassing delicacy and beauty.—The Science Monthly.

A New Remedy for Diphtheria.—It is to Germany that we are indebted for this efficacious and simple treatment, which consists of large doses of oleum terebinthinæ rectificatum. Different writers have highly extolled it and ascribe to it actions which seem almost miraculous.

It would appear that scarcely half an hour after its administration a bright scarlet tint begins to encircle the diphtheritic exudation, gradually increasing in size, at length completely envelopes and replaces the false membrane.

Authors, who have been liberal in their praises, affirm that within twenty-four hours after the ingestion of the remedy, the disease has wholly disappeared, leaving hardly a trace.

The treatment, however, appears to be attended with such marvellous success and promptness of effect only when the disease is in the first stages ; nevertheless, even after the disease has existed several days, though not as prompt, it exerts a decided curative action and hastens ultimate recovery. The dose, which is best given immediately after, or in a little warm milk, ranges from a teaspoonful for children to a tablespoonful for adults, morning and evening.—Journal de Therap.

Traumaticine.—Auspitz uses a solution of 1 part of guttapercha in 10 of chloroform as a vehicle for the application of certain medicaments in skin diseases. Thus he dissolves 1 part of chrysarobin in 10 of the solution, which is painted on the patches of psoriasis after the scales have been removed by washing with soap and hot water. He also uses it with pyrogallic and salicylic acids.

DICTIONARY OF PRACTICAL SURGERY. — Mr. Christopher Heath has undertaken to edit for Messrs. Smith and Elder a "Dictionary of Practical Surgery," on the lines of Quain's Dictionary of Medicine, which has scored such a satisfactory success. The new dictionary is to be a compendium of the practice of surgery of the present day, readily available for reference by the busy practitioner, and it is hoped it will be published within two years from now. The articles will be signed, and will be expressed as concisely as possible, historical details being omitted, and questions of pathology only discussed when absolutely necessary. The profession will look forward with great interest to the publication of this work, which is much wanted, and which will no doubt fully come up to the expectations which all who know its editor will have formed of it.

SALICYLIC HAIR TONIC.—The following formula has the endorsement of a correspondent of the Druggists' Circular, as a remedy of value in dandriff, itching of the scalp, and falling of the hair:—Borate of soda ʒx, salicylic acid ϑx, tincture of cantharides ʒvj, bay rum ʒxxv, rose water ʒxxv, boiling water, enough to make Ojvss. Dissolve the borax and acid in the boiling water; mix the bay rum and rose water with the solution; then add the rest and filter.

MEYLERT ON THE OPIUM HABIT.—Dr. A. P. Meylert (New York Med. Record, Jan. 5, 1884) says he is satisfied that the easiest and best method of treatment for opium habituation, one which may be adapted to all cases, is gradually to increase the interval of narcotic administration, simultaneously diminishing the dose.

Obituary.

MALIM SHARMAN, M.R.C.S. ENG.

Death has been too frequent a visitor to the members of our profession during the last twelve months. We regret to record the decease of Mr. Malim Sharman, one of the best known, and we may add, best liked practitioners in this town. He held the position of Consulting Surgeon to the Children's Hospital, and was also one of the certifying surgeons under the Factory Acts. Entering the profession rather late in life, by his talents and industry, his honourable character and genial disposition, he acquired an excellent family practice, and was regarded with affection by a large circle of friends. His death took place, after a very short illness, at the comparatively early age of fifty-nine.

Miscellany.

BOUILLAUD'S VERBOSITY.—In his recent History of Medicine, M. Guardia says that Bouillaud was too easily led away by his easy flow of language, and that as years went on this fault became exaggerated, and his speeches grew longer and longer. One day, when leaving the Academy, after one of these lengthy orations, someone asked Littré his opinion of the orator, to which he replied, "Ce pauvre Bouillaud il est mort depuis trente ans."

OLD SHOES.

"How much a man is like old shoes!
For instance: both a soul may lose;
Both have been tanned; both are made tight
By cobblers; both get left and right;
Both need a mate to be complete,
And both are made to go on feet;
They both need heeling, oft are sold,
And both in time all turn to mould.
With shoes the last is first; with men
The first shall be the last; and when
The shoes wear out they're mended new:
When men wear out they're men-dead, too.
They both are trod upon, and both
Will tread on others, nothing loath.
Both have their ties, and both incline
When polished in the world to shine:
And both peg out—and would you choose
To be a man or be his shoes?"

New Books, &c., Received.

The South African Medical Journal. Vol. I., No. I.—A Practical Introduction to Medical Electricity. By A. DE WATTEVILLE, M.A., M.D., B.Sc. Second Edition. London: H. K. Lewis. 1884.—Medical Fashions in the Nineteenth Century. By EDWARD T. TIBBITS, M.D. London. London: H. K. Lewis. 1884.—Annuaire des Spécialités Médicales et Pharmaceutiques. Paris. Cinquième Année. Two copies.—A System of Obstetric Medicine and Surgery. By ROBERT BARNES, M.D., and FANCOURT BARNES, M.D. Vol. I. Smith, Elder, and Co. 1884.—Atlas of Female Pelvic Anatomy. By D. BERRY HART, M.D., F.R.C.P. E. Edinburgh: W. and A. K. Johnston.—Post-nasal Catarrh and Diseases of the Nose causing Deafness. By EDWARD NOAKES, M.D. Lond. London: H. K. Lewis. 1884.—Prostitution under the Regulation System, French and English By YVES GUYOT. Translated from the French by EDGAR BECKET TRUMAN, M.D., F.C.S. With twenty-five diagrams. London. 1884.—Handbook of Geographical and Historical Pathology. By Dr. AUGUST HIRSCH. Vol. I. Translated by C. W. CREIGHTON, M.D. London: The Sydenham Society. 1883.

THOMAS CHASE,

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PURE CALVES' FEET JELLY,

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It has long been earnestly desired that Clear Turtle Soup of the most nourishing kind, equal in quality to that supplied at the London Tavern, should be obtainable in the provinces, when wanted, at a moment's notice. This desideratum C. BENSON, Senr., now supplies, and personally superintends the manufacture of the clear Turtle Soup for Invalids.

He respectfully directs attention to the following letters from Dr. A. Bostock Hill, Analyst to the County of Warwick; Mr. Walter C. Freer, M.R.C.S.; and Mr. Charles Warden, M.D.:—

"I beg to report that I have made a careful examination of the sample of Turtle Soup submitted to me on the 14th instant, and find that it is of excellent quality, containing about 2½ times as much nutriment as soup ordinarily sold. From this fact, as well as from its careful preparation and delicious flavour, it is particularly well adapted for invalids and those requiring nourishment in a form easily assimilated, and I feel sure that it only requires to be known to become highly appreciated.

"A. BOSTOCK HILL, M.D."

"I have just been enjoying some of your 'Clear Turtle Soup.' I cannot imagine a finer restorative for aged persons, or those suffering from exhausting diseases. I hope the demand will be such as to justify you in keeping a regular supply of such a delicious invigorating food.

"WALTER C. FREER."

"39, Temple Street, Birmingham.

"I hereby certify that I have tried the New Turtle Soup prepared by Mr. C. BENSON of 98, Bull Street, and consider it pure and of excellent quality, and am of opinion that it will prove a most nutritious and valuable agent in the treatment of any disease accompanied with great debility or nervous prostration.

"Signed, "CHARLES WARDEN, M.D.,
Hon. Surgeon to the Orthopædic Hospital and Ear and Throat Infirmary."

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KOUMISS.

BRONZE MEDAL, LONDON INTERNATIONAL EXHIBITION, 1873.

BRONZE MEDAL, EXPOSITION ET CONGRÉS D'HYGIÈNE ET DE SAUVETAGE À BRUXELLES, 1876.

AWARD OF MERIT INTERNATIONAL MEDICAL AND SANITARY EXHIBITION, 1881.

SILVER MEDAL INTERNATIONAL & COLONIAL FOOD AND PRODUCE EXHIBITION, 1881.

SILVER AND BRONZE MEDALS NATIONAL HEALTH SOCIETY, 1883.

KOUMISS.—An agreeable highly digestible form of nourishment, rapidly and easily assimilated by the weakest stomachs; highly nutritious as a sole diet, when other foods cannot be digested. Extraordinary cases are on record attesting the valuable properties of Koumiss in numerous cases of General Debility, Poverty of Blood, Consumption (latent or fully developed), Irritability of the Stomach, vomiting of pregnancy, and generally in all cases of Weakness and Delicacy of Digestion.

ARTIFICIAL HUMAN MILK.—Prepared at the suggestion of an eminent Physician, who, in writing to the "BRITISH MEDICAL JOURNAL," May 21, 1881, says:—"I should like to direct the attention of practitioners to the ARTIFICIAL HUMAN MILK now prepared by the AYLESBURY DAIRY COMPANY, at a cost little over that of the best Nursery Milk."

SPECIAL MILK FOOD FOR INFANTS.—This preparation of Milk was first made in order to meet the requirements of a special case then under treatment by a well known Physician in one of the great London Hospitals. Since then it has been supplied in several cases where exceptionally delicate infants could not take any other food.

PEPTONIZED MILK.—An Artificially digested food for the use of the sick.

WHEY.—Prepared WITHOUT ACID, and free from FAT and CASEIN.

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Mr. F. BEECH, Chemist, 71, Mary Street.
Mr. T. CHASE, Pharmaceutical Chemist, Edgbaston.

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Mr. ARTHUR SANKEY, L.R.C.P., L.R.C.S., and L.M. Edin.

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By PROFESSOR ATTFIELD, F.R.S., F.I.C., F.C.S., Etc.

I have periodically analysed the Extract of Malt termed "Maltine." In October, 1878, I was able to report that it contained, unimpaired and in a highly concentrated form, the whole of the valuable soluble materials which it was possible to extract from either malted wheat, malted oats, or malted barley. In March, 1881, I stated that no better preparation of malt had up to that time been manufactured, either as regarded strength in (*a*) the nutritive substances termed albuminoids, (*b*) the bone-forming materials known as phosphates, or (*c*) that which gives Malt Extract its chief value, or digestion-compelling power, namely, diastase. I now, October, 1883, find that its makers have succeeded in so increasing its strength in diastase that it contains from three to five times as much of that substance as any extract of malt in the market. It digests five times its weight of starch in ten minutes, ten times its weight in twenty-five minutes, and thirty times its weight in three to four hours. Three-and-a-half parts of phosphates and fifty-six of albuminoids are present in one-thousand parts of Maltine. Its flavour and odour are those of a delicious sweetmeat.

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We beg to announce to the Medical Profession that we have made a most important improvement in Beef Peptonoids, and are thereby enabled to offer a preparation very greatly increased in nutritive constituents, and *pleasant* in *odour* and *taste* to the most delicate person.

Beef Peptonoids being composed of the nitrogenous constituents of beef, wheat, and milk, forms in itself a perfect flesh-forming food.

There is no food preparation that compares with it in nutritive properties.

It is partially prepared for assimilation, and therefore makes but little demand upon the digestive powers of the gastric juice.

Being in the form of a dry powder, it will keep in any climate.

It contains 70 per cent of nitrogenous (flesh-forming) matter, and over 20 per cent. of warmth-producing substance.

It possesses twenty-five times more nutritive matter than Liebig's Extract of Beef or similar productions.

One ounce of Beef Peptonoids has more nutritive matter than five pints of beef tea prepared from eighty ounces of beef.

A few spoonsful of Beef Peptonoids are equal to the meal of a person with a healthy appetite.

Beef tea and similar preparations to Liebig's contain but little else than the stimulating properties of the beef, and are, therefore, almost valueless as constructives.

All works heretofore published by chemists and analysts agree that Caviar (a Russian product) ranks first in nitrogenous value. Beef Peptonoids contain 70 per cent., while Caviar contains but 25 per cent. of nitrogenous matter.

DIRECTIONS FOR USE.

For an Adult—A desertspoonful to a tablespoonful. Children in proportion.

Taken with milk it forms a most pleasant drink, which will be found palatable by those to whom milk alone is distasteful.

Added to beef tea, broths, soups, &c., it supplies the nitrogenous principle primarily found wanting in the above-named preparations.

The nutritive value of bread may be greatly increased by the addition, before baking, of one to two ounces of Beef Peptonoids per loaf.

It may be added to jellies, oatmeal, arrowroot, rice, &c.

By adding a small quantity of milk and water it may be made into a paste, flavoured to the taste, and eaten with a spoon, like cream.

Spread upon buttered bread, it makes a most palatable and nourishing sandwich.

By the addition of hot water, beef tea can be instantly made. Season to taste.

Beef Peptonoids is the only preparation, rich in nitrogenous matter, that is pleasant to the taste.

Careful tests of the various preparations of beef in the market having the flavour of Liebig's Beef Extract and Beef Tea show that they possess but little else than the salts or stimulating properties of the beef.

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It will be found the best food for invalids who cannot digest farinaceous matter through imperfect mastication and insalivation.

Rich in phosphates and nitrogen.

From Dr. Eustace Smith, *Physician-extraordinary to H.M. the King of the Belgians.*

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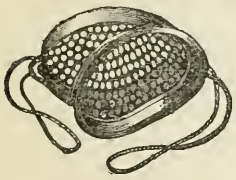

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Certificate of Composition and Properties
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Prof. ATTFIELD, Ph.D., F.R.S., F.I.C., F.C.S.,
Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain.

LONDON, *May 3rd, 1882.*

LACTOPEPTINE having been prescribed for some of my friends during the past five years—apparently with very satisfactory results—its formula, which is stated on the bottles, and its general characters, have become well known to me. But recently, the Manufacturer of this article has asked me to witness its preparation on the large scale, to take samples of its ingredients from large bulks and examine them and also mix them myself, and to prepare Lactopeptine from ingredients made under my own direction:—doing all this with the object of certifying that Lactopeptine is what its maker professes it to be, and that its ingredients are in quality the best that can be obtained. This I have done, and I now report that the almost inodorous and tasteless pulverulent substance termed Lactopeptine is a mixture of the three chief agents which enable ourselves and all animals to digest food. That is to say, Lactopeptine is a skilfully prepared combination of meat-converting, fat-converting, and starch-converting materials, acidified with those small proportions of the acids that are always present in the healthy stomach; all being disseminated in an appropriate vehicle, namely, powdered sugar of milk. The acids used at the factory—lactic and hydrochloric—are the best to be met with, and are perfectly combined to form a permanent preparation; the milk sugar is absolutely pure; the powder known as "diastase" or starch-digesting (bread, potato, and pastry-digesting) material, as well as the "pancreatin," or fat-digesting ingredient, are as good as any I can prepare, while the pepsin is much superior to that ordinarily used in medicine. Indeed as regards this chief ingredient—pepsin—I have only met with one European or American specimen equal to that made and used by the Manufacturer of Lactopeptine. A perfectly parallel series of experiments showed that any given weight of acidified pepsin alone at first acts somewhat more rapidly than Lactopeptine containing the same weight of the same pepsin. Sooner or later, however, the action of the Lactopeptine overtakes and outstrips that of pepsin alone—due, no doubt, to the meat-digesting, as well as fat-digesting power of the pancreatine contained in the Lactopeptine. My conclusion is that Lactopeptine is a most valuable digesting agent and superior to pepsin alone.

JOHN ATTFIELD.

One of the chief features of **LACTOPEPTINE** (and the one which must gain it a preference over all digestive preparations) is, that it *precisely represents in composition* the *natural digestive juices* of the *stomach, pancreas,* and *salivary glands,* and will therefore readily dissolve all foods necessary to the recuperation of the human organism.

Dose.—ONE-THIRD that of cheap substitutes, and giving results not within the compass of any other agent.

For further particulars, send for descriptive pamphlet, with cases showing results in practice.

LACTOPEPTINE may be had of all Chemists. Price 4s. 6d., in ounce Bottles, with a dose measure attached, and can be sent by post. Each bottle contains forty-eight 10-grain doses. Samples sent to any member of the Medical Profession on request. LACTOPEPTINE is prepared solely by—

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Exhibited, by Authority of the Medical Council, at the International Medical & Sanitary Exhibition, South Kensington, 1881; also at the Meeting of the British Medical Association, Worcester, 1882.

The essential constituents & properties are printed on the label of each bottle sent out.

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LIN. PLUMBI LACTATIS CO.

Report from CHARLES A. CAMERON, M.D., F.R.C.S.I., Professor of Chemistry and Hygiene in the Royal College of Surgeons, Ireland; Medical Officer of Health and Analyst for Dublin; Analyst to the Royal Agricultural Society, etc.: —"Royal College of Surgeons, Dublin, July 30th, 1880.—I have examined a specimen of LIN. PLUMBI LACTATIS CO., submitted to me for that purpose by Mr. J. P. WILSON, Chemist, and the following are the results at which I arrived: —I consider it an excellent application to the Skin when affected with such cutaneous affections as Eczema, Prurigo, Impetigo, etc., as well as for inflammation arising from Scalds, etc. From the composition of this preparation I am satisfied that its use will be attended with decided benefit, and I can confidently recommend it to the notice of Medical Practitioners."

From W. JOHNSON SMITH, Esq., F.R.C.S., Senior Surgeon to the Seamen's Hospital, Greenwich:—June 29, 1881—"During the past twelve months WILSON'S LIN. PLUMBI LACTATIS has been extensively used in this hospital with very satisfactory results both in cases of skin disease, and those of severe injury by burning." Also Oct. 4th, 1883—"Speaking for myself, I am more and more convinced, every month, that the Liniment is an invaluable agent in surgical practice."

Extract from the "BIRMINGHAM MEDICAL REVIEW" for May, 1883:—"After a considerable experience of this preparation we are able to say that it is an exceedingly valuable remedy, especially useful to allay itching and irritation. It is applied to Burns, Scalds, and Ulcers, and is employed in the treatment of Eczema, Bed-sores, Erysipelas, and other Cutaneous Diseases, while its astringent properties make it invaluable as an injection in Leucorrhœa, and other Catarrhal Affections of mucous surfaces."

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Vide *Lancet*, 13 Oct., 1883, page 631; and "Lectures on the Surgical Diseases of the Urinary Organs" (1880) by Reginald Harrison, F.R.C.S.,E., page 60.

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